

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 000007002PCT	<b>FOR FURTHER ACTION</b>	See item 4 below
International application No. PCT/JP2008/051695	International filing date ( <i>day/month/year</i> ) 28 January 2008 (28.01.2008)	Priority date ( <i>day/month/year</i> ) 29 January 2007 (29.01.2007)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant EISAI R & D MANAGEMENT CO., LTD.		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Box No. I   | Basis of the report   |
| <input type="checkbox"/> Box No. II             | Priority  |
| <input checked="" type="checkbox"/> Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/> Box No. IV             | Lack of unity of invention  |
| <input checked="" type="checkbox"/> Box No. V   | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI             | Certain documents cited   |
| <input type="checkbox"/> Box No. VII            | Certain defects in the international application  |
| <input type="checkbox"/> Box No. VIII           | Certain observations on the international application   |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 338 82 70	Date of issuance of this report 04 August 2009 (04.08.2009)
	Authorized officer  Masashi Honda  e-mail: pct08.pct@wipo.int

# PATENT COOPERATION TREATY

TRANSLATION

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference <b>000007002PCT</b>		<b>FOR FURTHER ACTION</b> See paragraph 2 below	
International application No. <b>PCT/JP2008/051695</b>	International filing date (day/month/year) <b>28.01.2008</b>	Priority date (day/month/year) <b>29.01.2007</b>	
International Patent Classification (IPC) or both national classification and IPC			
Applicant <b>EISAI R &amp; D MANAGEMENT CO., LTD.</b>			

1. This opinion contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the opinion
<input type="checkbox"/>	Box No. II	Priority
<input checked="" type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1b/s(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP	Date of completion of this opinion	Authorized officer
Facsimile No.		Telephone No.

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Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:
  - ☒ the international application in the language in which it was filed
  - ☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. ☐ This opinion has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a)).
3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material
    - ☐ on paper
    - ☐ in electronic form
  - c. time of filing/furnishing
    - ☐ contained in the international application as filed
    - ☐ filed together with the international application in electronic form
    - ☐ furnished subsequently to this Authority for the purposes of search
4. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

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Box No. III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. 18

because:

☒ the said international application, or the said claims Nos. 18 relate to the following subject matter which does not require an international search (*specify*):

Claim 18 "pertains to a method for treatment of the human body by therapy," and thus relates to a subject matter which does not require an international search under the provisions of PCT Rule 39.1(iv).

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. \_\_\_\_\_ are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. \_\_\_\_\_ are so inadequately supported by the description that no meaningful opinion could be formed (*specify*):

- ☒ no international search report has been established for said claims Nos. 18
- ☐ a meaningful opinion could not be formed without the sequence listing; the applicant did not, within the prescribed time limit:
- ☐ furnish a sequence listing on paper complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in a form and manner acceptable to it.
  - ☐ furnish a sequence listing in electronic form complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in a form and manner acceptable to it.
  - ☐ pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rule 13ter.1(a) or (b).
- ☐ a meaningful opinion could not be formed without the tables related to the sequence listings; the applicant did not, within the prescribed time limit, furnish such tables in electronic form complying with the technical requirements provided for in Annex C-bis of the Administrative Instructions, and such tables were not available to the International Searching Authority in a form and manner acceptable to it.
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in electronic form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.
- ☐ See Supplemental Box for further details.

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-17	YES
	Claims	NO
Inventive step (IS)	Claims	YES
	Claims 1-17	NO
Industrial applicability (IA)	Claims 1-17	YES
	Claims	NO

2. Citations and explanations:

Document 1: WO 2003/099813 A1 (Eisai Co., Ltd.), 04 December 2003

Document 2: WO 2005/116013 A1 (Takeda Chem. Ind. Ltd.), 08 December 2005

Document 3: JP 2001-348384 A (Sankyo Co., Ltd.), 17 December 2001

Document 4: JP 2002-145885 A (Otsuka Kagaku Yakuhin KK), 22 May 2002

Document 5: WO 2006/121104 A1 (Eisai R&D Management Co., Ltd.), 16 November 2006

Document 6: JP 2004-269488 A (Hayashibara Biochemical Lab.), 30 September 2004

Claims 1, 2 and 4-17

The invention as in claims 1, 2 and 4-17 does not involve an inventive step in view of documents 1-4 cited in the ISR.

Document 1 indicates that the compound represented by the formula (I) described in claim 1 of the present application, which has an anti-solid tumor activity, is obtained as an oily substance (example 45). Additionally, document 1 has a general description indicating that the crystal polymorph may exist in said compound (page 34). Furthermore, producing said compound

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

by the method described in claims 13 and 14 of the present application is described (pages 53 to 63).

Documents 2-4 describe a method in which after dissolving the compound obtained as an oily substance in a good solvent, a poor solvent is added thereto to cause crystallization. Furthermore, document 2 also indicates that, by crystallization, it is possible to increase product purity, and handling becomes easier when used as an active ingredient of a pharmaceutical product (paragraphs [0003] and [0007]).

As described in documents 2-4, after dissolving the compound obtained as an oily substance in a good solvent, adding a poor solvent thereto to cause crystallization is considered to be a method for producing a crystal, which is common practice for a person skilled in the art, and with regard to the compound described in document 1 suggesting the existence of a crystal polymorph, it is not considered to be especially difficult to obtain a crystal by said technique. Furthermore, with reference to the descriptions of documents 2-4, selecting the most suitable solvent from publicly-known solvents, and setting the temperature of crystallization and the condition with or without stirring as appropriate are not considered to require special ingenuity.

Furthermore, even if the disclosure in the description of the present application is referred to, the invention is not considered to exhibit an especially advantageous effect that a person skilled in the art could not predict from documents 1-4.

Claim 3

The invention as in claim 3 does not involve an inventive step in view of documents 1-6 cited in the ISR.

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

As described in document 5 (paragraph [0045]) and document 6 (paragraph [0046]), the method for obtaining an amorphous form of a compound by dissolving a crystal of compound in a solvent and then freeze-drying the same, is considered to have been well known to a person skilled in the art.

From this viewpoint, also with regard to the compound represented by the formula (I) described in claim 1 of the present application, which is produced on the basis of the descriptions of documents 1-4, a person skilled in the art could have easily conceived of employing said technique to obtain the amorphous form, and practicing said matter is not considered to exhibit a remarkable effect.